

What is claimed is:

1.

A method of fission product disposal in permanent icefields, comprising:
storing nuclear reactor waste for a period of time sufficient to let short life materials decay;
separating the balance of the fission products from the actinides;
embedding the separated fission products in a metal matrix having a sufficient thermal conductivity and a sufficiently high melting point to successfully store the fission products and thereafter placing the fission product matrix as the core of a capsule container having a container core and outer cover to encase the fission products,
said outer cover being a corrosion resistant material with sufficient strength, density, and thermal conductivity to avoid environmental corrosion over time, and being of a dimensional configuration such that the radiation outside the container does not exceed safety limits, and such that the outside surface of the container is of a sufficiently high temperature to melt ice found in permanent icefields, yet is not sufficiently high to seriously enhance corrosion of the sphere.

2.

The method of claim 1 wherein said metal matrix is selected from the group consisting of lead, copper and tin alloys.

3.

The method of claim 1 wherein the fission products matrix of the core are oxides in a lead matrix.

Sub A2

4.
The method of claim 1 wherein the storage for a time sufficient to let short life materials decay is at least ten years.

5.
The method of claim 1 wherein the separated actinides are recycled for fuel use.

6.
The method of claim 1 wherein the capsule container is solid stainless steel, surrounding a core of fission products embedded in a metal matrix.

7.
The method of claim 1 wherein the outer cover is stainless steel.

Sub A3

8.
A radiation waste container for use in storage of fission product in permanent ice, comprising:
a corrosion resistant container having a core filled with fission product separated from the actinides,
said fission product being in a metal matrix to successfully encapsulate and store said fission product,
said core and container being dimensionally configured such that radiation outside the container does not exceed safety limits and that the container surface reaches a temperature sufficiently high to melt ice, but not corrode the container surface.

9.
The container of claim 8 wherein the metal matrix is a lead matrix.

10.
The container of claim 8 wherein the corrosion resistant container is stainless steel.

sub a4

11.

The container of claim 8 wherein ~~the~~ embedding metal matrix is deposited by electrochemical deposition.

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